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ELECTRIC POWER TRANSMISSION
AND TELEPHONE NETWORK IN NORTHWEST KOREA

Content: The following two charts and four tables show the electric power and telephone networks in northwest Korea under the administration of the P'yongyang Transmission Department. They are reproduced from an undated blueprint, published by the Bureau of Electricity Administration of the Democratic People's Republic of Korea, entitled, "Summary of P'yongyang Transmission Department's Maintenance Districts and Telephone Network."

Chart No 1 shows the maintenance offices for the high-tension power lines extending from the 38th Parallel to P'yongyang northward to the Sup'ung Power Plant, and southwestward along the Korean-Manchurian Border to T'sado. Eastward from P'yongyang the lines extend to the Ch'angjin Power Plant No 2.

Chart No 2 shows the telephone network under the jurisdiction of the P'yongyang Transmission Department. The maintenance offices for this telephone system are generally located in the same towns or villages as are those of the electric power system.

The four tables which precede the charts give additional information on the equipment of the power and telephone lines. A list of place names mentioned in the charts and tables with their geographical coordinates, has been added to show, where identifiable, the approximate location of each maintenance station. Figures in tables and charts have been reproduced from the blueprint. No attempt has been made to reconcile apparent discrepancies between the tables and the charts.

- 1 -

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ARMY	X	X							

TABLE I. P'YONGYANG TRANSMISSION DEPARTMENT POWER LINES

NAME OF LINE	SECTION TERMINALS		VOLTAGE (KV)	EXACT LENGTH (KM)	ELECTRIC WIRE*	
	FROM:	TO:			MATERIAL	THICKNESS (MM)
NO 1 P'YONGYANG	HAEGUN	NO 1 P'YONGYANG	154	199.9	STEEL CORE ALUMINUM	ST 7/3.1** AL 30/3.1
SEOUL	NO 1 P'YONGYANG	38TH PARALLEL (SEOUL)	154	135.5 (187.5)	STEEL CORE ALUMINUM	ST 7/2.9 AL 30/2.9
NO 2 P'YONGYANG	SUP'UNG	NO 2 P'YONGYANG	220	179.5	STEEL CORE ALUMINUM	ST 7/2.82 AL 54/2.82
UNSAN	SONGYANG	UNSAN	154	60.3	STEEL CORE ALUMINUM	ST 7/3.1 AL 30/3.1
NAMP'IO	NO 2 P'YONGYANG	NAMP'IO	220	39.5	STEEL CORE ALUMINUM	ST 7/2.82 AL 54/2.82
TASADO	SUP'UNG	TASADO	220	74.9	STEEL CORE ALUMINUM	ST 7/2.82 AL 54/2.82
CONNECTING LINE	NO 1 P'YONGYANG	NO 2 P'YONGYANG	154***	17.3	BARE HEAVY COPPER	19/4

* POWER LINES ARE CARRIED ON STEEL TOWERS.

** ST 7/3.1 AL 30/3.1 MEANS SEVEN STEEL STRANDS, EACH OF WHICH IS 3.1 MILLIMETERS THICK, AND 30 ALUMINUM STRANDS, EACH OF WHICH IS 3.1 MILLIMETERS THICK.

*** AT PRESENT, 66 KILOVOLTS ARE TRANSMITTED.

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TABLE 2. PIYONGYANG TRANSMISSION DEPARTMENT TRANSFORMERS

NAME OF TRANSFORMER STATION		POWER OUTPUT (kVA)	POWER PER TRANSFORMER (kVA)	PHASE	DESCRIPTION OF TRANSFORMER	
					PRIMARY VOLTAGE (kv)	SECONDARY VOLTAGE (kv)
NO 1 PIYONGYANG						
	SET A	90,000	15,000x7*	1	154	66
	SET B	1,500	500x3*	1	11	3.3
	SET C	2,250	750x3*	1	66	3.3
NO 2 PIYONGYANG						
	SET A	200,000	100,000 $\sqrt{3} \times 2$	3	220	66
	SET B	3,500 $\sqrt{3} \times 2$	1,350x4*	1	66	22
	SET C	900	300x3	1	22	3.3
UNSAK						
	SET A	34,500	19,500x1 15,000x1	3	154	66
	SET B	1,200	400x3	1	22	3.3
	NAMPYO	100,000	100,000 $\sqrt{3} \times 17$	3	220	66
	TASADO	200,000	100,000x2	3	220	66

* ONE TRANSFORMER IN EACH SET IS HELD IN RESERVE. ALTHOUGH THE SOURCE STATES THAT ONE TRANSFORMER EACH IN SETS B AND C IS HELD IN RESERVE, IT APPEARS FROM THE OUTPUT FIGURES THAT THE RESERVE TRANSFORMERS ARE IN USE.

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TABLE 3. P'YONGYANG TRANSMISSION DEPARTMENT TELEPHONE LINES

NAME OF LINE	SECTION TERMINALS		EXACT LENGTH (KM)	NO OF CIRCUITS	TELEPHONE WIRE	
	FROM:	TO:			KIND OF MATERIAL	THICKNESS (MM)
NO 1 P'YONGYANG	HAGICH'ON	P'YONGYANG	217.8	2	BARE HEAVY COPPER GALVANIZED IRON WIRE	3.2 4
SEOUL	P'YONGYANG	SEOUL	219.1	2	BARE HEAVY COPPER GALVANIZED IRON WIRE	3.2 4
NO 2 P'YONGYANG	SUP'UNG	NO 2 P'YONGYANG	195.4	2	BARE HEAVY COPPER GALVANIZED IRON WIRE	3.2 4
UNSAN	SONGYUNG	UNSAN	70.2	2	STEEL CORE ALUMINUM GALVANIZED IRON WIRE	St.1/1.8 Al.1/1.8
NAMP'0	No 2 P'YONGYANG	NAMP'0	42.5	2	BARE HEAVY COPPER GALVANIZED IRON WIRE	3.2 4
TASADO	SUP'UNG	TASADO	81.3	2	BARE HEAVY COPPER GALVANIZED IRON WIRE	3.2 4
CONNECTING LINE	No 2 P'YONGYANG	No 1 P'YONGYANG	20.8	3	STEEL CORE ALUMINUM	St.1/1.8 Al.6/1 3.2 MM 4MM

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Under P'yongyang Transmission Department

<u>District and Station</u>	<u>Tower Numbers</u>	<u>Distance (km)</u>	<u>Transmission Line</u>
<u>Songyang District</u>			
Hagich'on	1-18	6.00	
Sinp'ung	19-47	9.00	
Tokko-ri	48-75	8.00	
Chunghung	76-102	8.00	
Sach'ang-ni	103-123	7.00	
Inch'o-ri	124-155	9.00	
Onyang-ni	156-200	13.00	
Samgo-ri	201-231	11.00	
Yongwon	232-289	15.00	
Songyang	270-330	13.00	
<u>No 1 P'yongyang District</u>			
Pukch'ang	331-381	14.05	
Kach'ang-ni	382-415	12.45	
Sinch'ang-ni	416-470	19.05	
Yongt'aeng-ni	471-514	14.85	
Kwangdong-ni	515-568	18.35	
Nosan-ni	569-610	16.25	
P'yongyang	611-622	4.54	
<u>No 1 P'yongyang District</u>			
P'yongyang	1-36	10.20	
Majang-dong	37-96	18.80	
Yu-ri	97-130	12.40	
Tumu-ri	131-156	11.80	
Sindang-ni	157-189	19.50	
<u>Seoul Transmission Line</u>			

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<u>District and Station</u>	<u>Tower Numbers</u>	<u>Distance (km)</u>	<u>Transmission Line</u>
<u>No 1 P'yongyang District</u>			
Chungch'ong	190-212	8.20	
Nogan-ni	213-243	11.70	
<u>Namch'on Switching Station District</u>			
Namch'on	244-280	14.00	
Wonu-dong	281-311	12.00	
Kilsu-ri	312-337	12.00	
Hwajang	338-357	11.00	
Kyongnung	358-406	16.10	
Munsan	407-456	15.80	
Kwansan	457-504	15.60	
Susaeng-ni	505-526	7.90	
<u>No 2 P'yongyang District</u>			
Sup'ung	1-13	5.00	
Sakchu	14-34	8.00	
Onp'ung-dong	35-53	8.00	
Ch'angsins-dong	54-82	11.00	
Taean-dong	83-113	12.00	
Ch'onjin-dong	114-134	8.00	
Kusong	135-167	12.00	
Nacha-dong	168-197	10.00	
T'aech'on	198-226	12.00 *	
Pakch'on	8-54	18.20 **	
Yongui	227-271	16.00 ***	
Mansong	272-317	16.00 ****	
Sukch'on	318-354	16.20	

- 6 -

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<u>District and Station</u>	<u>Tower Numbers</u>	<u>Distance (km)</u>	<u>Transmission Line</u>
<u>No 2 P'yongyang District</u>			
Sogam	365-389	13.30	
Yongjang	390-437	13.00	
Choch'on	438-462	6.80	No 2 P'yongyang Transmission Line
<u>Unsan District</u>			
Songyang	1-20	7.00	
Tokch'on	21-49	12.60	
Somin-dong	50-68	8.70	
Kujang-dong	69-112	15.80	Unsan Transmission Line
Kosong-dong	113-141	9.80	
Unsan	142-162	6.40	
<u>Namp'o District</u>			
Choch'on	1-11	4.70	
Taep-yong	12-30	6.80	
Kiyang-ni	31-62	13.70	
Ipsong-ni	63-85	7.90	Namp'o Transmission Line
Namp'o	86-102	6.40	
<u>Tasado District</u>			
Sul'ung	1-15	6.20	
Pup'yong-dong	16-23	6.80	
Toryong-dong	29-51	9.40	
Isong-dong	52-71	8.70	
Waryong-dong	72-95	10.40	Tasado Transmission Line
Uiju	96-115	7.90	
Ssanghak-tong	116-142	11.40	*****
Ibam-dong	143-170	9.80	
Pukchung	171-175	4.50	

- 7 -

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<u>District and Station</u>	<u>Tower Numbers</u>	<u>Distance (km)</u>	<u>Transmission Line</u>
<u>Connecting Line</u>			
No 2 P'yongyang	1-28	6.50	Connecting Transmission Line
No 1 P'yongyang	29-64	10.50	

* Revised distance from No 128 to No 1 is 305 meters.

** Revised distance from No 8 to No 54 is 18.8 kilometers.

*** Revised distance from No 2 to No 85 is 2.6 kilometers.

**** Revised distance from No 55 to No 78 is 7.8 kilometers.

***** 11.20 kilometers, according to Chart No 1.7

List of Place Names

	<u>Lat N</u>	<u>Long E</u>
Ch'angsin-dong	40 14	125 07
Ch'onjin-dong	40 03	125 14
Choch'on	39 02	125 40
Hwajang	38 04	126 39
Ibam-dong	40 01	124 26
Inch'o-ri	40 04	126 52
Ipsong-ni	38 50	125 26
Isong-dong	40 18	124 46
Kach'ang-ni	39 32	126 17
Kilsu-ri	38 09	126 35
Kiyang-ni	38 55	125 32
Kosong-dong	39 53	125 53
Kujang-dong	39 52	126 01
Kusong	39 59	125 15
Kwangdong-ni	39 12	125 57
Kwansan	37 42	126 52
Kyongnung	38 00	126 40

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	<u>Lat N</u>	<u>Long E</u>
Majang-dong	38 52	125 56
Mansong	39 30	125 35
Munsan	37 51	126 47
Naeha-dong	39 54	125 23
Namch-on	38 20	126 24
Nogan-ni	38 27	126 20
Nosan-ni	39 05	125 52
Onp'ung-dong	40 18	125 04
Onyang-ni	39 59	126 46
Pakch'on	39 44	125 35
Pukch'ang	39 35	126 20
Pukchung	39 57	124 26
Pup'yong-dong	40 23	124 54
P'yongyang No 1	39 01	125 44
P'yongyang No 2	39 00	125 46
Sach'ang-ni	40 06	126 55
Sakju	40 23	125 03
Samgo-ri	39 59	126 29
Sinch'ang-ni	39 25	126 08
Sindang-ni	38 35	126 14
Sinp'ung	40 08	127 13
Somin-dong	39 53	126 10
Songyang-ni	39 24	125 31
Ssanghak-tong	40 00	124 32
Susaeng-ni	37 35	126 53
Sukch'on	39 25	125 37
Sup'ung	40 27	124 57
Tagan-dong	40 09	125 13
T'aech'on	39 55	125 30

- 9 -

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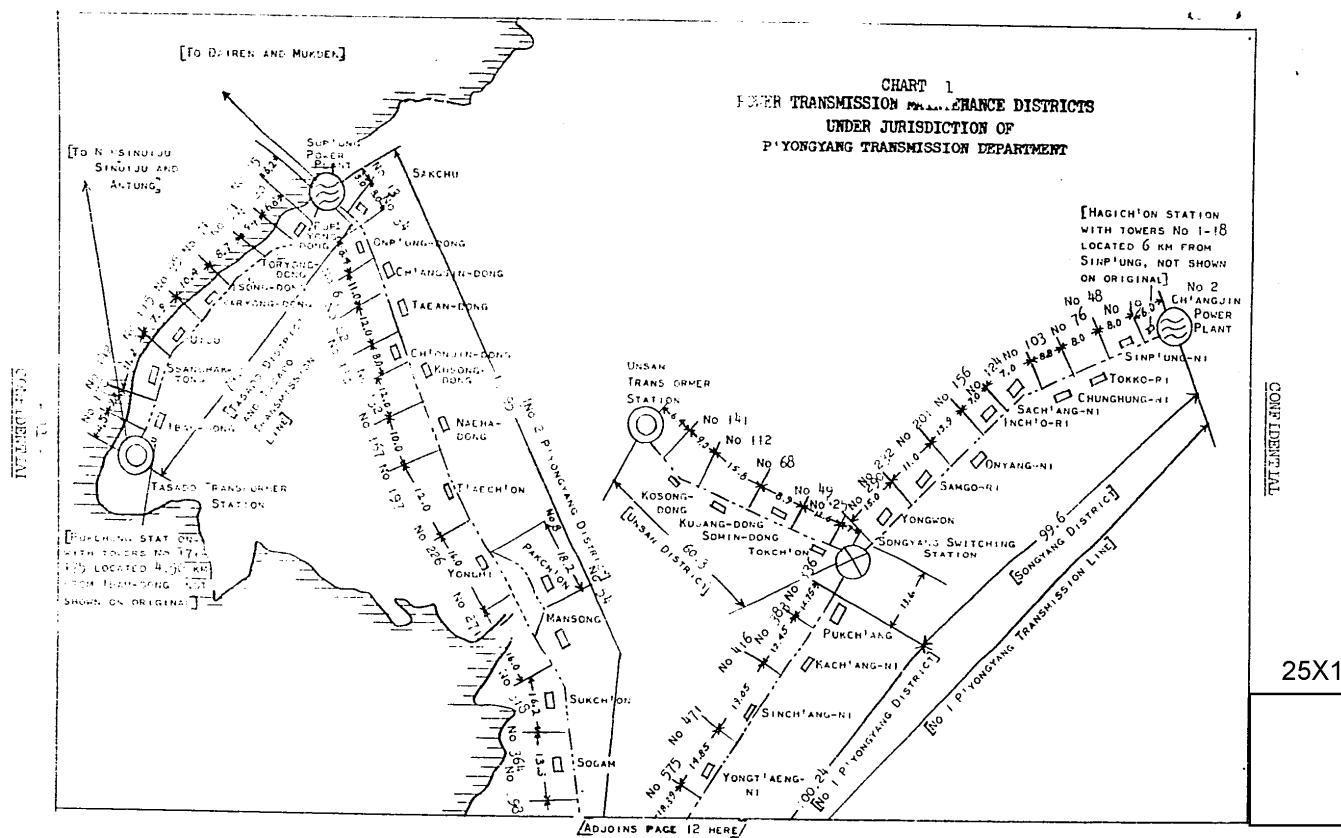
	<u>Lat N</u>	<u>Long E</u>
Taep'yong	38 59	125 37
Tasado	39 51	124 26
Tokch'on	39 45	126 18
Tokko-ri	40 07	127 08
Toryong	40 21	124 51
Tumu-ri	38 40	126 06
Uiju	40 12	124 32
Unsan	39 58	125 48
Waryong-dong	40 14	124 40
Wonu-dong	38 13	126 32
Yongjang-ni	39 29	125 30
Yongmi	39 40	125 31
Yongt'aeng-ni	39 19	126 04
Yongwon	39 35	125 52
Yu-ri	38 46	126 01

(See Chart 1 and Chart 2 on following pages.)

- 10 -

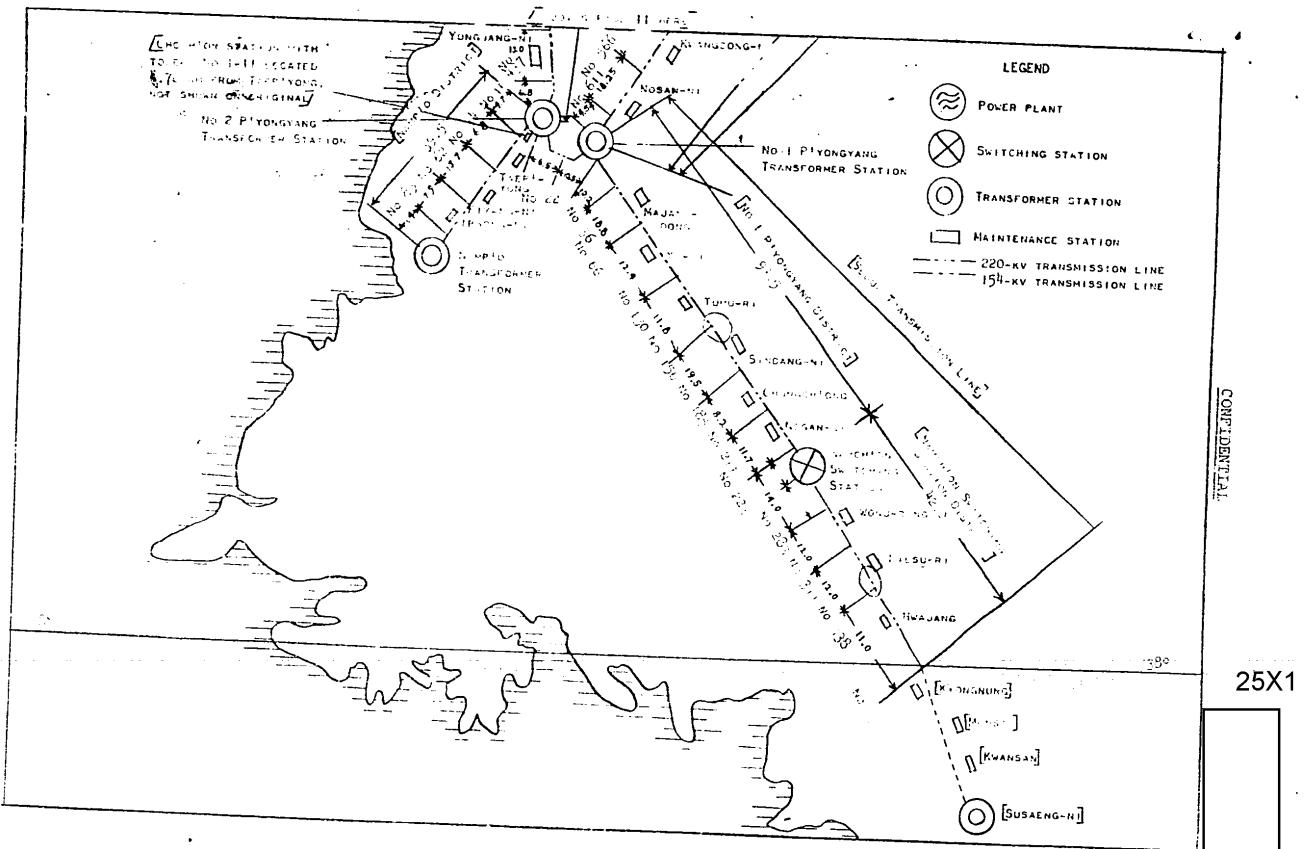
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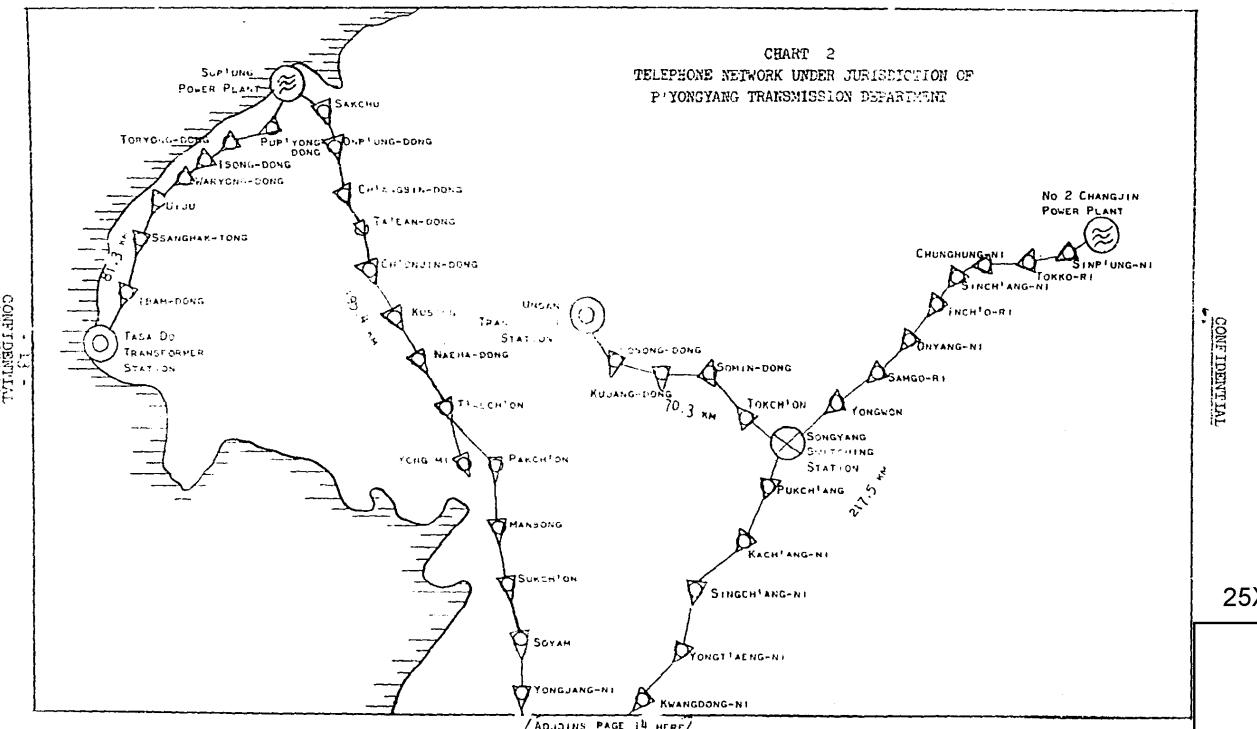


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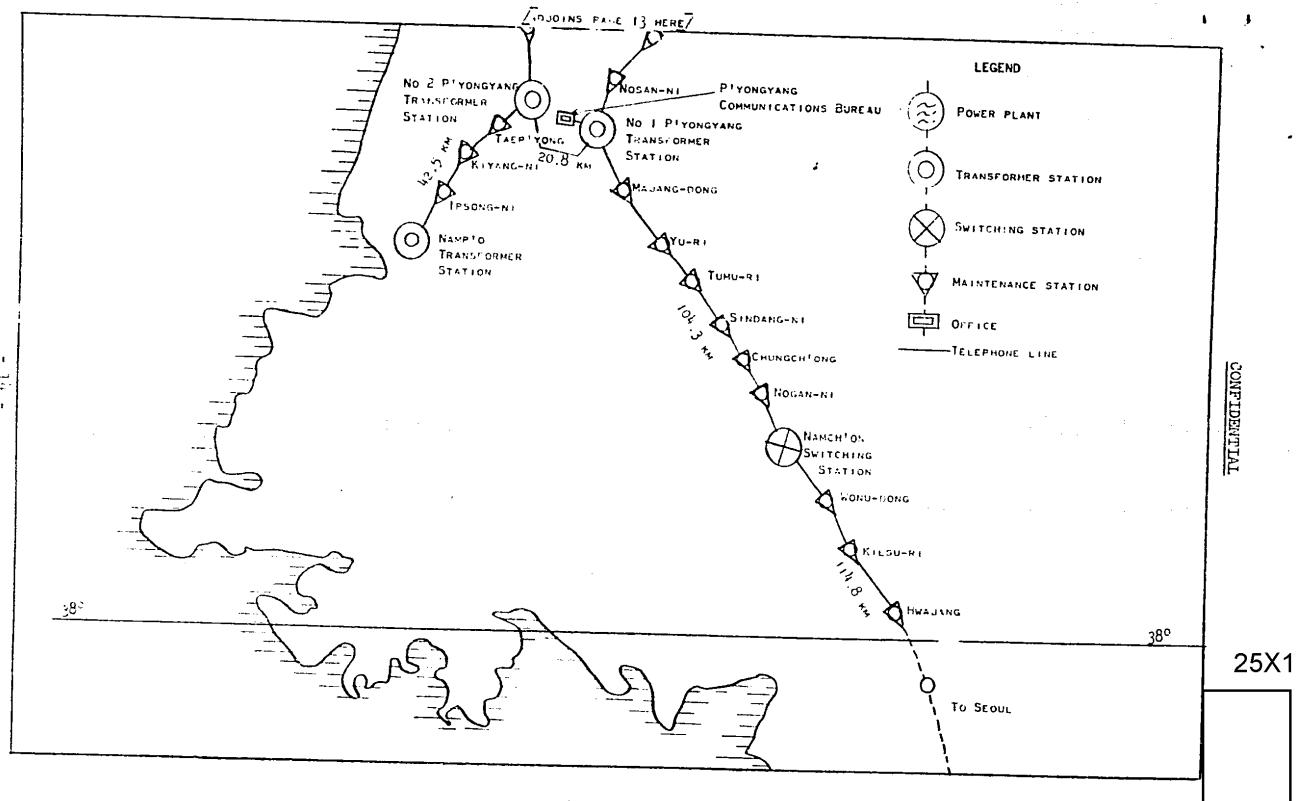
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SECURITY

Chart 1.

THE 220-KV TRANSMISSION SYSTEM OF NAMDAR DISTRICT
Under JUNGHEON

T'YONGYANG TRANSMISSION DEPARTMENT

LEGEND

Power Plant

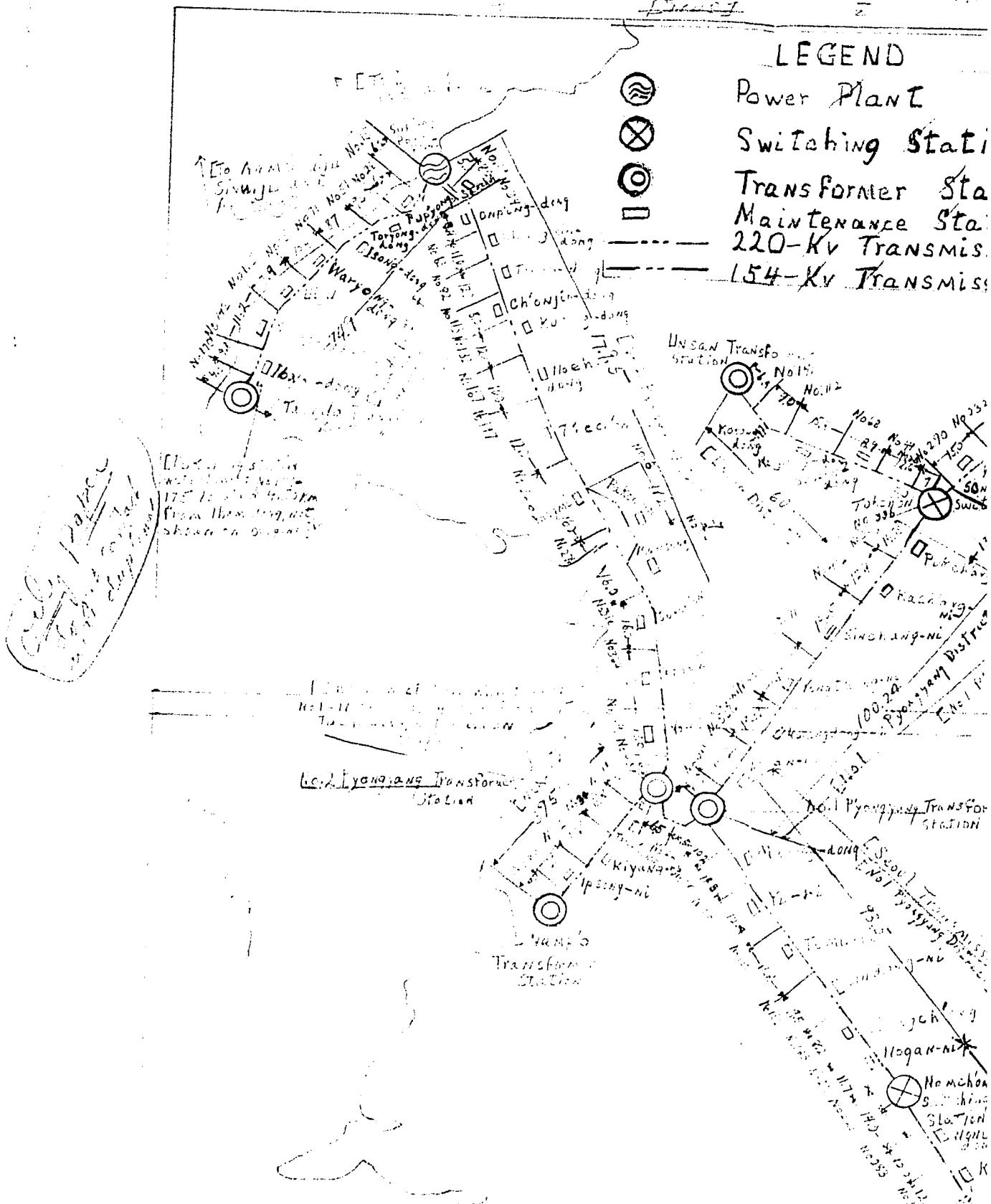
Switching Station

Transformer Sta

Maintenance Sta

220-KV Transmis

154-KV Transmiss



Swatching Station

Transformer Stat

Maintenance Staff

220-KV Transmiss.

154-X Transmiss1

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[Pekin station with 2000 ft. Net 175 ft. Located 450 km from Iben-ting, N.W. shown on original]

Chauhan Station with towers
Kot-11 2 miles N. 4,700 ft from
Tambawang at 5,000 ft N

COMMITTEE SECURITY INFORMATION

SECURITY INFORMATION
UNDER TRANSPORTATION MAINTENANCE DISTRICTS
Under JURISDICTION OF

TYONGYANG TRANSMISSION DEPARTMENT

LEGEND

Power Plant

Switching Station

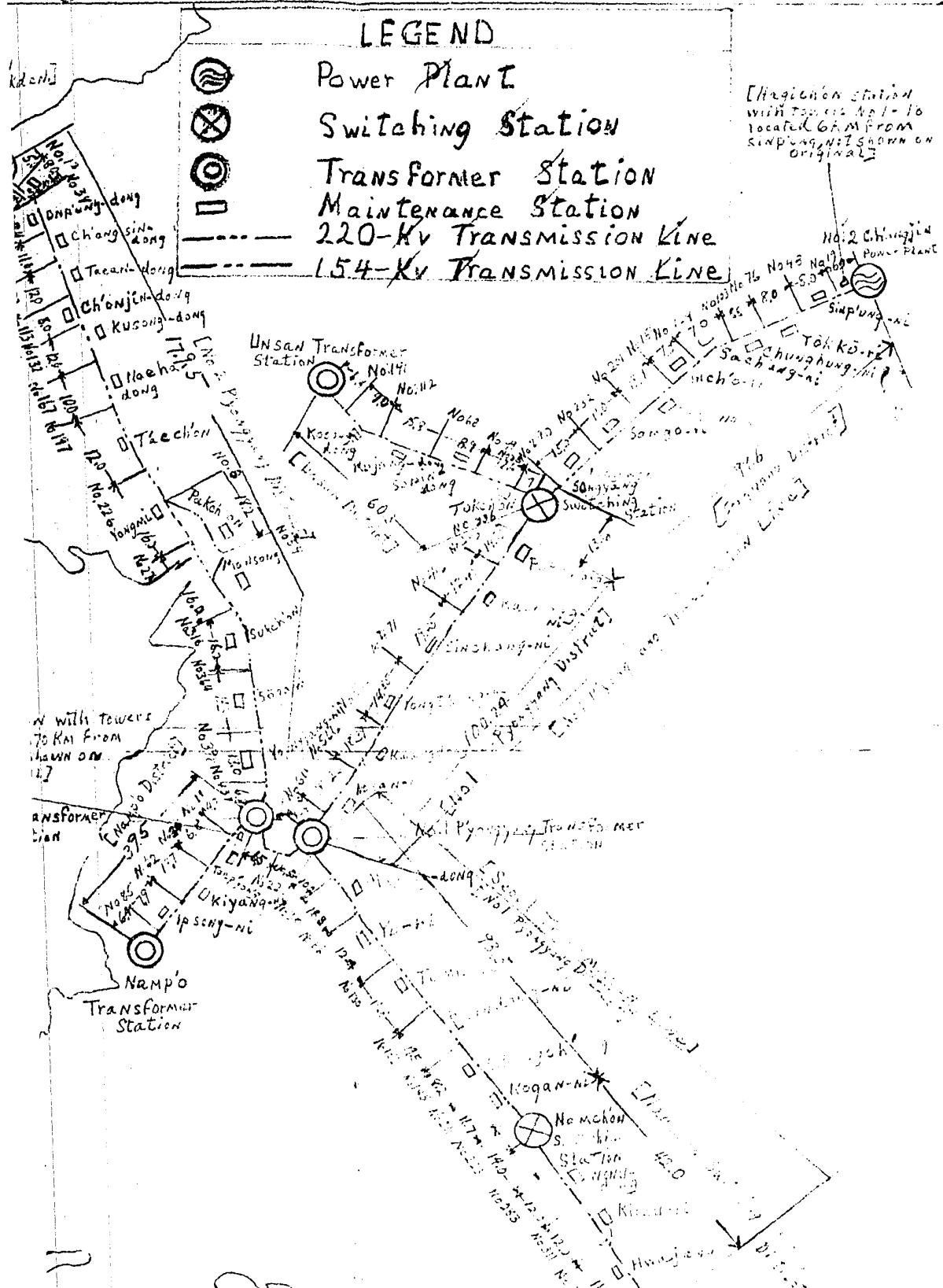
Transformer Station

Maintenance Station

220-kV Transmission Line

154-KV TRANSMISSION LINE

El Cajon station
with tower No. 1-10
located 6 AM from
Simpson Net shown on
original



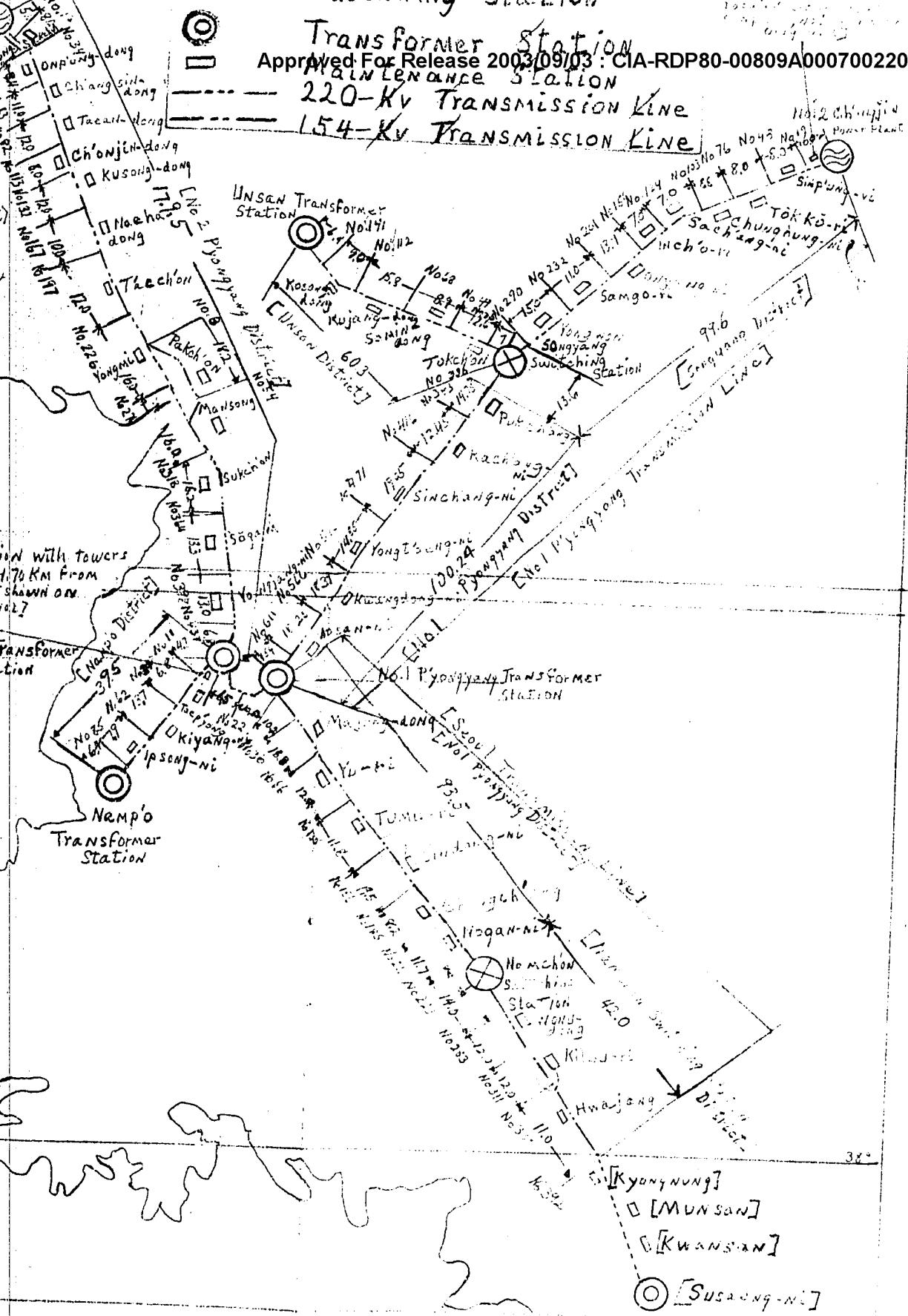
Transformer Station

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MAINTENANCE STATION

220-KV TRANSMISSION LINE

154-KV TRANSMISSION LINE



CONTINUED

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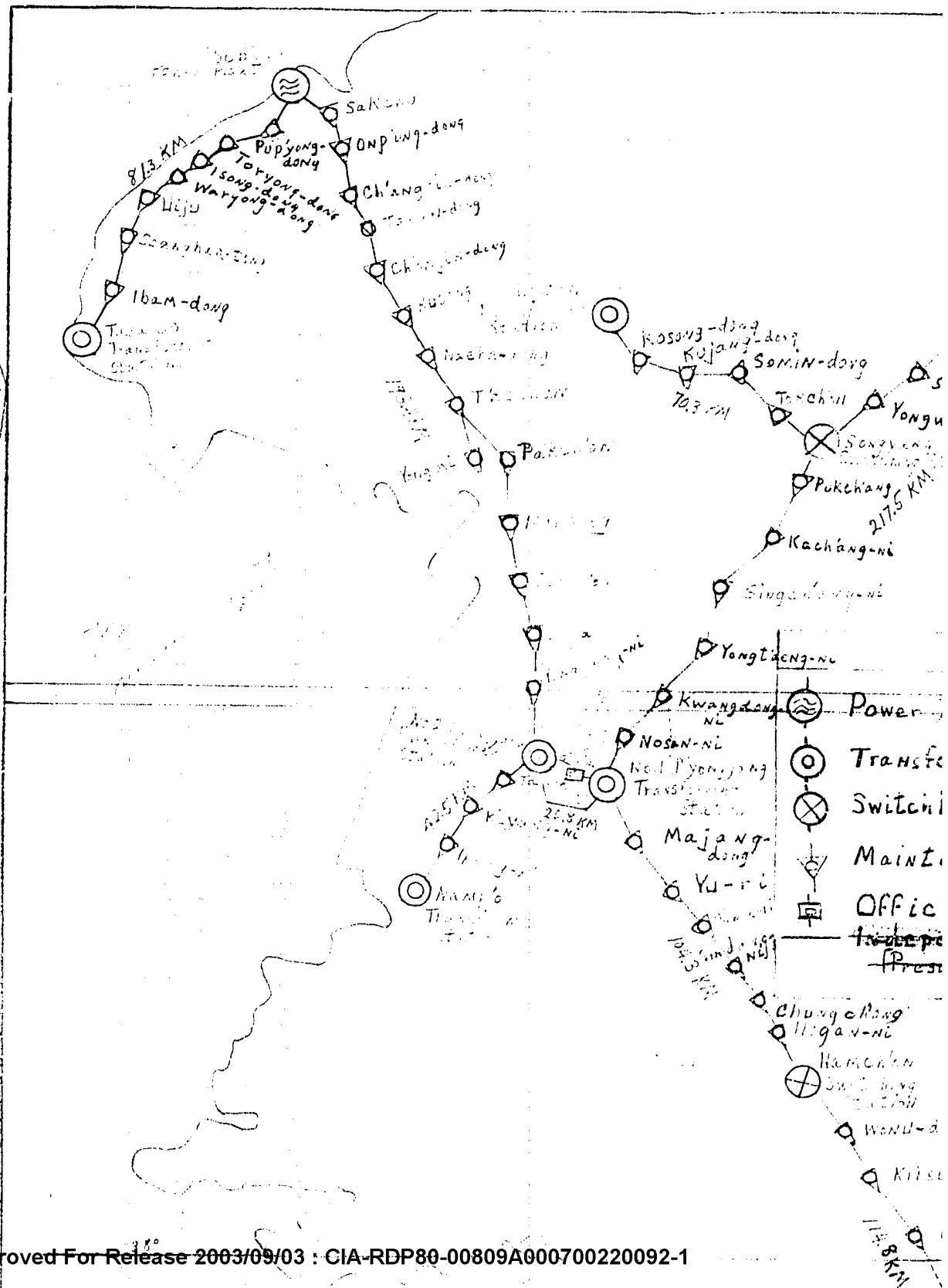
Chart 2.

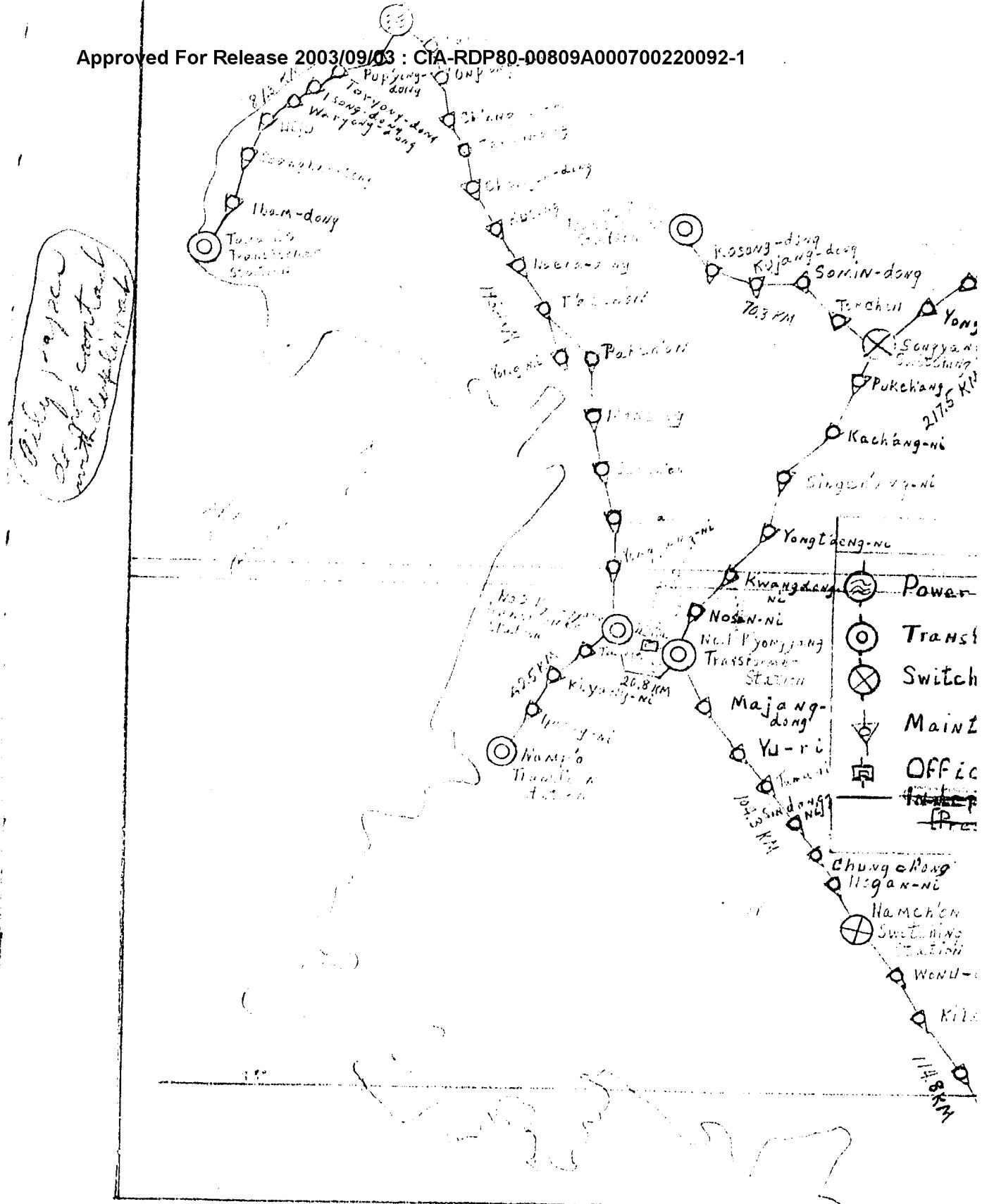
TELEGRAPHIC WIRELESS

LUDIEN - TAKSIN - TAKSIN - 12

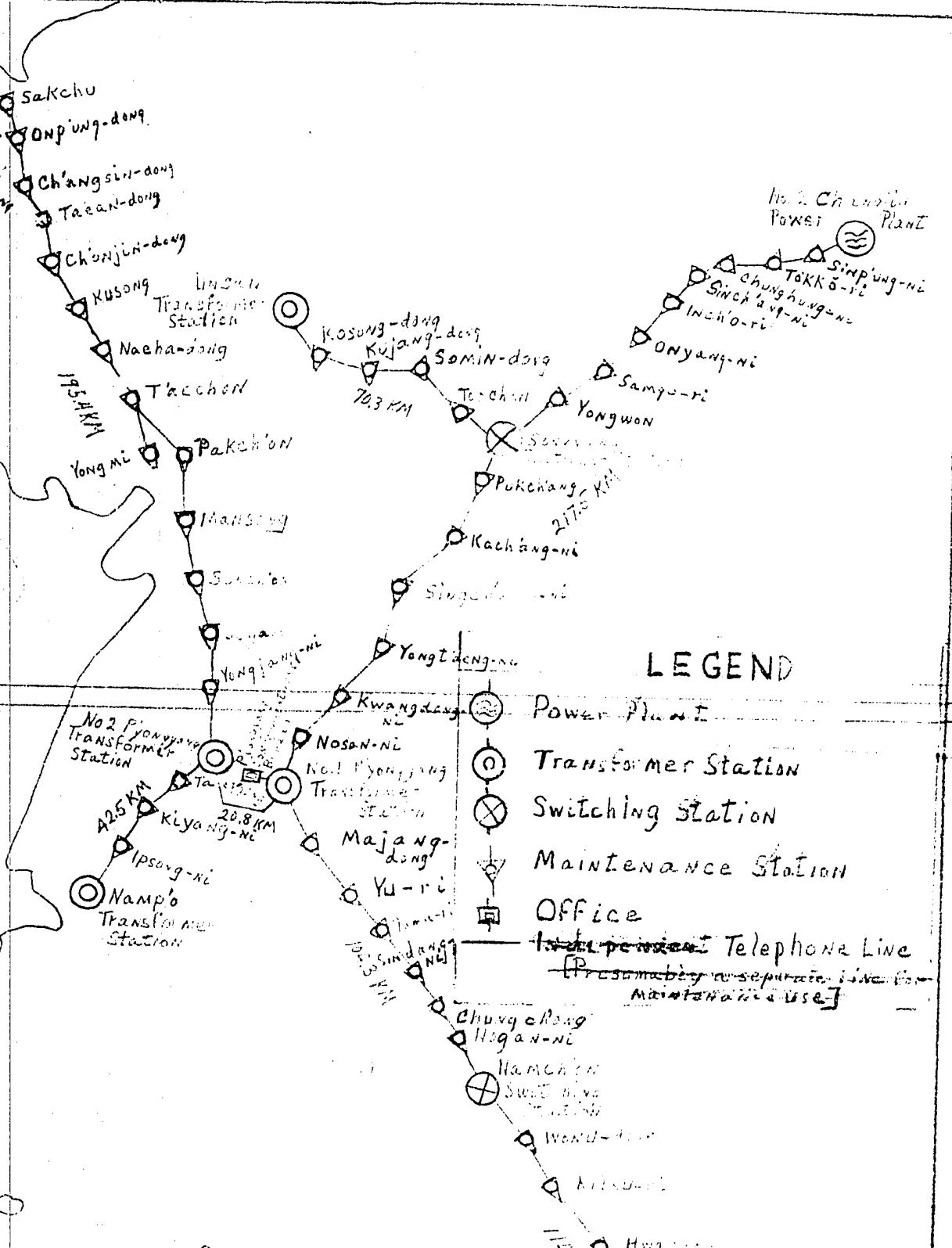
SYNAN YANA TELEGRAPHIC DEPARTMENT

City 1 stage
at 1st contact
with reposition





TELEPHONE NETWORK
Under JURISDICTION OF
YANTIYANG TRANSMISSION DEPARTMENT



LEGEND

Power Plant

Transformer Station

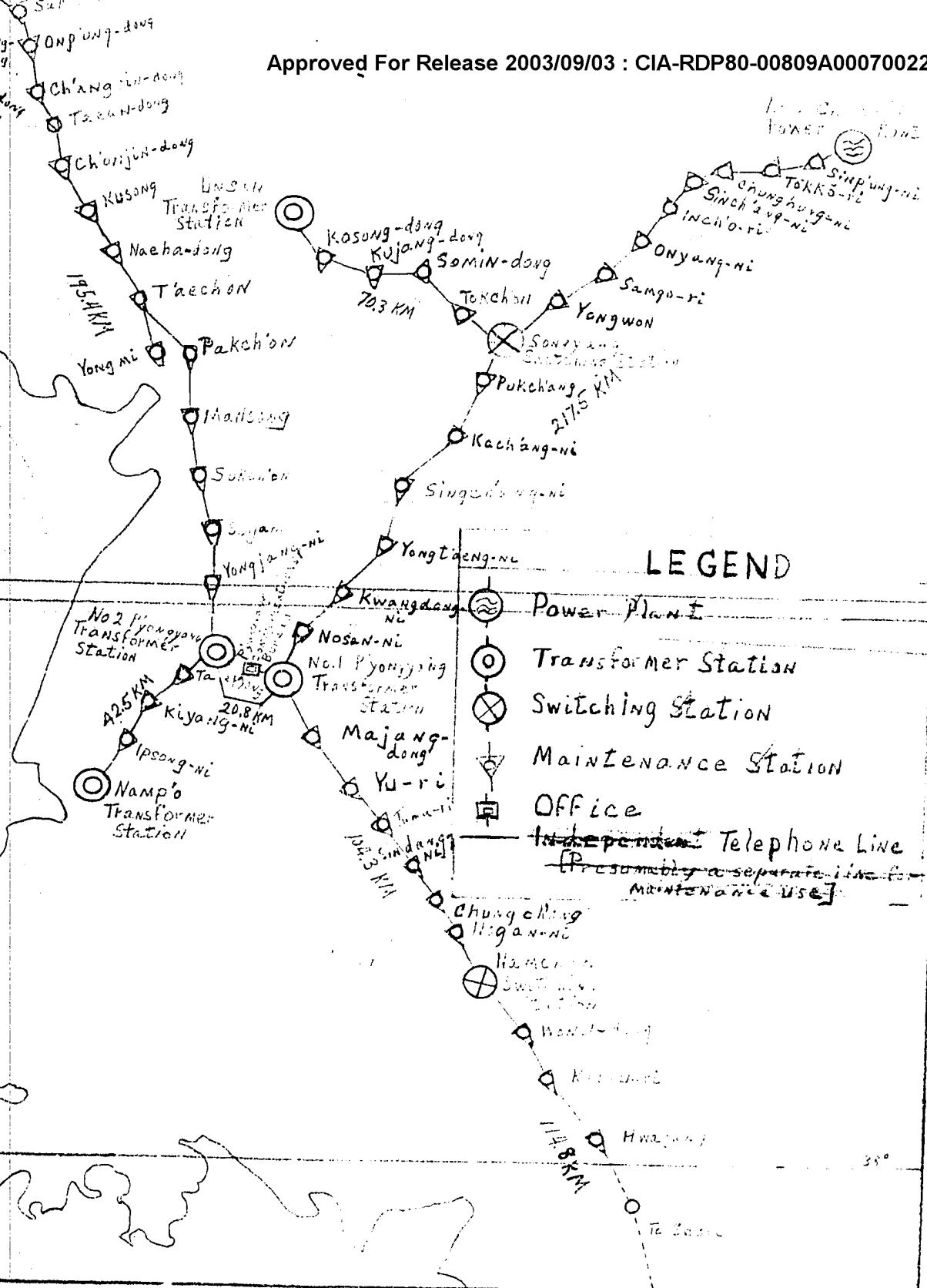
Switching Station

Maintenance Station

Office
List

Telephone Line

Ministries in Sepulveda, Los Angeles,
California 91343-2707



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